

TOUR: MEET YOUR NEIGHBOR

OBJECTIVES

To familiarize students with animals that are native to Michigan and be able to explain the different adaptations for life in a four-season environment.

TERMS

Endangered, extirpated, habitat, migration, hibernation, adaptation, temperate deciduous forest

CONCEPTS

More than 3,500 species of plants and animals inhabit the Great Lakes basin, including 170-plus species of fish. The Great Lake, four of which border Michigan, make up the largest body of fresh water on Earth, accounting for one-fifth of the freshwater surface on the planet. Michigan has the second longest shoreline of any state and no point in Michigan is more than six miles (10 km) from an inland lake or more than 85 miles (137 km) from one of the Great Lakes. The temperate deciduous forest biome that covers Michigan is always changing. It has four distinct seasons: winter, spring, summer and fall. Michigan's native animals have to be able to survive the heat of summer, when temperatures can reach into the 90s and even the 100s, and the cold of winter, when temperatures drop below zero and the wind chill can make it feel much colder. And of course, the Upper Peninsula has longer, harsher winters than the Lower Peninsula, and many animals that are adapted to one part of the state might not survive in another part.

ANIMALS TO HIGHLIGHT

Bald eagles: Previously a threatened species, eagles are making a strong comeback in Michigan. Eliminating the use of dangerous pesticides such as DDT and protecting nest sites from human disturbances has made the difference. We have had a nesting pair in the area. During Michigan winters, bald eagles are seen throughout the state (almost all counties), while they nest mainly in the Upper Peninsula (especially the western portion) and the northern portion of the Lower Peninsula. These eagles don't really migrate; they just move south enough to stay ahead of the ice and congregate near open water. Immature birds may move further south.

North American River otters: Northern river otters are listed in Appendix II of CITES. Populations were once extirpated through many parts of their range, due to overhunting in the 1800s, and habitat loss or alteration due to the damming of river systems, especially around heavily populated areas in the midwestern and eastern United States. Population trends have stabilized in recent years and reintroduction and conservation efforts have resulted in recolonization of areas where they were previously extirpated.

Gray wolf: Once endangered in all lower 48 states, wolves are doing well in Minnesota, are recovering in northern Wisconsin and Michigan's Upper Peninsula, and have been successfully re-introduced into some western national parks. Wolves are very secretive in nature, and as humans started encroaching on their environment, wolves were pushed further and further into the wilderness. Re-introduction into various areas in North America has proven fairly successful, and consideration has been given to reclassifying their status on the Endangered Species List.

Raven: Their Michigan range is the Upper Peninsula and northern Lower Peninsula, and they are common in the jack pine forest and live in Michigan year-round.

Barred owl: Live in large, mature forests made up of both deciduous trees and evergreens, often near water. At night they hunt small animals, especially rodents, and give an instantly recognizable "Who cooks for you?" call. Live in Michigan year-round.

Farmyard: Michigan has over 52,000 farms that utilize 10 million acres (4 million hectares) of farmland. Michigan farmers raise most of the species found in our farmyard (can you guess which ones aren't raised in Michigan?) and many are adapted for Michigan's four seasons. Raised for food: Goats, chickens, rabbits, pigs. Raised for wool/fur: llamas, rabbits, goats (cashmere). Burros: often kept with other animals, such as sheep, to help keep the herd calm and look out for predators.

Moose: Due to logging, hunting and brainworm, moose disappeared from the Lower Peninsula in the 1890s, and after numerous reintroduction attempts throughout the 1900s, Michigan's current moose population is estimated at about 400 animals in the UP. The U.S. Fish & Wildlife service is considering whether to add the northwestern moose subspecies found in Michigan to the federal endangered list.

African crested porcupine: Like their New World equivalents, the North American porcupine found in Michigan, Old World porcupines are large, heavy-set, slow-moving animals that rely on their imposing quills for defense rather than on speed or agility. Unlike our arboreal porcupines, African crested porcupines are cursorial and are excellent diggers. Unlike North American porcupine quills, the quills of Old World porcupines lack barbules.

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BIRD & REPTILE HOUSE

Eastern screech owl: There are two color morphs (gray and rufous); gray is more common in Michigan. Both color morphs make them very difficult to distinguish from surrounding tree bark.

Other Michigan species in the BRH:

American kestrel

Blue jay

Green heron

American toad

Common gray tree frog

Mudpuppy

Northern leopard frog

Blanding's turtle: Protected by Michigan law as a special concern species

Common musk turtle

Map turtle

Massasauga rattlesnake: Protected by Michigan law as a special concern species and is a candidate for federal listing.

Painted turtle

Black rat snake: Protected by Michigan law as a special concern species

EDUCATION ANIMALS

Eagle owl: Very similar habitat and behavior as the great horned owl (also same genus, *Bubo*), which is found throughout Michigan, except the eagle owl is larger.

European ferret: Michigan has six mustelid species (least weasel, long tailed weasel, pine marten, ermine, fisher, and the American badger). The smaller species are similar in behavior and life history to the European ferret.

Sinaloan milk snake: Milk snakes (*Lampropeltis triangulum*) have many subspecies. The Sinaloan milk snake is a subspecies (*T. triangulum sinaloae*) that mimics native coral snakes. The Eastern milk snake (*Lampropeltis triangulum triangulum*), naive to Michigan, is camouflaged to blend in with our deciduous forest.

Brown rat: Not native to Michigan. Can discuss invasive species.

Domestic rabbit: The most common rabbit in much of the U.S., and Michigan, is the Eastern cottontail. Snowshoe hares and European hares (introduced) are also found in Michigan. Hares and jackrabbits are in the genus *Lepus*; all remaining species are referred to as rabbits. While hares are well-adapted for running long distances, rabbits run in short bursts and have modified limbs adapted for digging. Hares are often larger than rabbits and have black tipped ears. Newborn hares are precocial; newborn rabbits are altricial.